

**Council on Postsecondary Education  
December 14, 2007**

**Northern Kentucky University  
Regional Stewardship Program  
Stewardship Initiative Grant Proposal**

**ACTION:** The staff recommends that the Council approve two stewardship initiative proposals submitted by Northern Kentucky University and endorsed by its Regional Advisory Committee.

According to Council guidelines, stewardship initiatives funding supports specific public engagement activities at the institutions that improve economic prosperity, quality of life, or civic participation in the region or state, while furthering the goals and mandates of House Bill 1 and the Public Agenda. These funds are distributed to the comprehensive universities on a competitive basis based on responses to an annual request for proposals issued by the Council staff.

To receive consideration for funding, proposed initiatives must address critical regional needs, as identified in a strategic plan for regional stewardship developed in partnership with, and endorsed by, a region's stewardship advisory committee.

There are two rounds of stewardship initiative funding. The deadline for the first round of \$200,000 was October 1, 2007. The deadline for the second round of \$400,000 is June 1, 2008.

Proposals for stewardship initiative funds cannot be considered until the institution's strategic plan for stewardship activities and the priority area proposal have been submitted and approved and its regional grant funds have been distributed. Northern Kentucky University is the only comprehensive university that met this requirement by the October 1, 2007, deadline for the first round of funding. NKU submitted two proposals totaling \$200,000 (Attachment A and Attachment B). A team of Council staff and external reviewers evaluated each proposal. As a result, NKU was asked to clarify and expand upon certain items in each proposal (Attachment C).

## **Virtual CIO – Technology Stewardship for Small to Medium Organizations Including K-12, City and County Government and Business**

The Infrastructure Management Institute (IMI) at Northern Kentucky University requests \$116,500 to provide information technology assistance, collaboration, and services for the Northern Kentucky region and the rest of the Commonwealth of Kentucky as appropriate. Professional IT staff will direct NKU College of Informatics students in providing various services that will provide an economical stimulant to the Kentucky economy. NKU also will partner with ConnectKentucky. The specific objectives of the Virtual CIO initiative are to:

- Provide a set of services and templates to allow organizations to analyze their use of technology and help them plan for improving their adoption of technology.
- Provide experiential learning opportunities for NKU students.
- Provide a collaborative platform around technology for K-12, city, and county governments and small- to medium-sized businesses.
- Deliver affordable services that will allow organizations to leverage technology within their fields.
- Research and document technology best practices for these types of organizations and provide through a portal environment with self-help information.

There are five major types of activities within this initiative:

- A Web site for all participating organizations.
- Seminars and forums that are of direct interest to the organizations participating in the collaboration.
- A technology help desk that includes self-help information, information about technology trends, assessments, and templates.
- Lower cost IT-based solutions for the organizations involved.
- Technology assessments that allow organizations to rate their adoption of technology as compared to similar organizations.

While this particular initiative and funding will be completed at the end of June 2008, the university hopes this project will serve as a pilot for future years and will be a model for other initiatives undertaken to serve organizations in the region that require lower cost IT solutions.

## **Summer Programs in Technology, Science, and World Cultures for Talented Youth in Northern Kentucky**

To address the economic competitiveness goal of Vision 2015, NKU requests \$83,500 to develop three summer camps to help talented youth develop critical thinking and creative problem-solving skills, increase their awareness of local educational and career opportunities in science and technology, and prepare them to be global citizens.

**INTERalliance IT Careers Camp Program:** Two one-week residential camps will provide a behind-the-scenes view into the world of information technology for 20 incoming eleventh graders each of the two weeks. Each session's students will be divided into four teams of five

students, with each team sponsored by a local corporate sponsor. The high schools with participating students will nominate a teacher to serve as advisor for one of the teams. The teams will compete for medals throughout the week in a variety of problem-solving exercises, teamwork challenges, and design projects, all of which will raise the awareness of the role of IT in business and the available careers in IT with local employers. The program is a collaboration among the university, the INTERalliance of Greater Cincinnati, four to eight corporate sponsors, and northern Kentucky high schools.

The INTERalliance IT Careers Camp program will accomplish the following objectives:

- Raise student awareness of the significant role of IT in various career pathways and the value of IT skills for future employment.
- Raise student awareness of the critical role IT plays in the problem-solving methodologies and processes of employers in all sectors.
- Raise student awareness of educational programs in IT and information management offered by NKU's College of Informatics.
- Increase student understanding of the importance of developing and utilizing a professional network.
- Provide students with a service learning experience that benefits a nonprofit organization by meeting an IT-related need.

**Emerging Technologies Camp Program:** The university's Center for Integrative Natural Science and Mathematics (CINSAM) will offer two one-week day camps. One camp will be geared toward students entering grades seven through nine, and the other camp will focus on students entering grades ten and eleven. Each camp will have 15 to 20 high-ability students chosen from northern Kentucky schools. Students will engage in a variety of scientific investigations lasting several days each, utilizing the most sophisticated equipment available at the university under the supervision and direction of NKU faculty.

CINSAM will partner with GEAR UP Kentucky schools and other local schools to identify talented students who will benefit from the opportunity to participate in these camps. After the research topics of the camps are finalized, NKU will establish partnerships with regional corporations or organizations to provide site visit opportunities for the students.

The objectives of the Emerging Technologies Camp are to:

- Develop creative problem-solving skills in middle and high school students in the context of innovative approaches to problems in science and technology.
- Motivate these students to pursue the study of advanced topics in science and mathematics.

**World Cultures Camp:** NKU will offer two one-week day camps for students entering grades three through six for up to 25 students per week. Northern Kentucky elementary schools will nominate gifted students to attend these programs. The camp activities will include films, demonstrations, computer activities, and creative learning activities. Topics will include world location, physical geography, climate, sports, dress, food, language, music, and dance. The students will be introduced to simple words and meanings of people, places,

and things in the language of each country studied. The students will be linked to international e-mail pals to encourage further communications across cultures.

The World Cultures Camp will be hosted by the university's College of Education and Human Services in partnership with local elementary schools, which will identify and nominate gifted students to attend. The Global Center of Greater Cincinnati will serve as a regional partner for the project, providing educational program materials for the camps. The Global Center is a nonprofit, nonpartisan organization that frequently partners with area universities and schools on projects involving global issues.

The purposes of the World Cultures Camp are to:

- Increase student knowledge about other cultures.
- Cultivate in the youngest students an appreciation for cultural diversity.

Based on assessment of the outcomes of the camps, NKU will work with the regional partners involved to create a sustained initiative for multiple cohorts of students and track the impact of the camps over time.



# Vision 2015

Transforming Northern Kentucky Through  
Talent, Innovation and Contribution

September 28, 2007

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Council on Postsecondary Education

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Dear Ms. Bell

On behalf of Vision 2015 and the Regional Advisory Committee, I am writing to express enthusiastic support of Northern Kentucky University's proposal to the Council on Postsecondary Education's "Regional Stewardship Initiative Program". NKU's proposal is titled, "Virtual CIO-Technology Stewardship for Small to Medium-sized Organizations, K-12, Healthcare, Government and Business". This proposal supports the development of effective and efficient IT management across the small and medium-sized organizations and businesses in the region that desperately need IT solutions.

The Virtual CIO program makes available to organizations and businesses best practice IT tools, assessments and strategies that have historically been unavailable or cost prohibitive to small and medium-sized organizations. This proposal clearly supports the region's economic competitiveness as well as the efficient operation of local governments and nonprofits, key goals of Vision 2015.

NKU's proposal is aligned with the goals of Vision 2015 and will directly contribute to the efficiency and effectiveness of the region's local governments, P-12, healthcare, and business sectors. The concept of the Virtual CIO takes the best of NKU's faculty and student assets from the College of Informatics and brings them out to the region to provide important IT solutions that promote deep collaboration across the public, private and educational sectors. This is exactly the sort of service provision and innovative approach that characterizes successful regions of the country.

The Vision 2015 Executive Committee wholeheartedly supports this NKU proposal to the Council on Postsecondary Education.

Sincerely,

Michael J. Hammons

President

# REGIONAL STEWARDSHIP PROGRAM STEWARDSHIP INITIATIVE PROPOSAL

Virtual CIO – Technology Stewardship for Small to  
Medium Organizations Including K-12, City & County  
Government and Business



# NORTHERN KENTUCKY UNIVERSITY

September 28, 2007

## **Project Abstract**

This initiative will further our strategic priority to “engage in effective regional stewardship” by supporting the economic and social progress of our region. The Infrastructure Management Institute (IMI) at Northern Kentucky University (NKU) proposes providing Information Technology (IT) stewardship, collaboration and services for the Northern Kentucky Region and rest of the Commonwealth of Kentucky as appropriate. Professional IT staff will direct NKU College of Informatics students in providing various services that will provide an economical stimulant to the Kentucky economy. These students will gain valuable experience in

the latest technology advancements and the various organizations that are engaged will receive lower cost effective solutions. These innovative solutions will accelerate the economic growth of these organizations and have a tremendous impact on the region. The organizations that will be targeted include K-12 school systems, city and county governments, and small to medium businesses. The stewardship with these entities will increase NKU's presence in the region and the Commonwealth. In particular, technology collaboration with the K-12 school systems will not only provide a key resource to these organizations but will accelerate the impact that technology has on the organization.



## Project Narrative

### 1. Analysis of Needs

The proposed Virtual CIO initiative for small to medium organizations(SMOs) in the Northern Kentucky region and perhaps across the state will address several significant regional needs identified in Vision 2015, the region's 10-year strategic plan that positions our region to compete in a global, knowledge-based economy. The university continues to use the Vision 2015 document as a guide for its regional stewardship work. Economic competitiveness is a major focus of Vision 2015. The Virtual CIO technology initiative will also further the Strategic Priority "Educational Excellence". NKU students will be directly engaged in providing the services to the organizations allowing them to gain experience in a complex and ever changing environment. These College of Informatics students will be exposed to real world experiences that will propel their success and the impact on the Commonwealth. The small to medium organizations who are struggling to meet the technology needs of their business will find a closely aligned ally in leveraging technology.

This initiative will also assist in promoting a "Competitive Economy". Competition in a global economy presents many challenges for most organizations and they need assistance to maintain a competitive edge. This project will provide many resources directed at solving technology focused problems that all of these organizations face. The Vision 2015 Report states:

***Competitive Economy:*** *The Northern Kentucky region will reinvent its economy and create new jobs that insure continued growth and prosperity.* Connectivity, clusters, and inclusion are the linchpins of reinvention in a globally competitive environment. Northern Kentucky must capitalize on digital advances to reinforce international and local opportunities for economic and social synergies. We must support homegrown talent and encourage innovation and entrepreneurship to attract high wage, advanced technology sectors and the jobs they create. Additionally, we must become a culturally literate community of inclusion that welcomes and respects people of talent, ambition, and aspirations.

The University has a vital role in preparing a technology savvy workforce that is ready to make an impact as soon as possible after graduation. Further, keeping the best of these students in this region is a priority and this initiative will demonstrate a “hi tech” need locally in the Commonwealth.

Our research has shown that there are many small to medium organizations in the Commonwealth of Kentucky that are in need of Information Technology (IT) expertise but they do not have the ability to source this expertise internally. These organizations are at varying states of technology implementation, but in the end they are not maximizing the deployment of IT within their environments. In fact, in many cases, IT within their organization is in an unhealthy state and is a significant impediment to their business success and growth. Many SMOs such as K-12, city/county government, healthcare providers, non-profits and businesses have an ever growing need to stabilize and leverage technology within their organization. But, they do not have the ability to internally staff the IT Subject Matter Expertise they require.

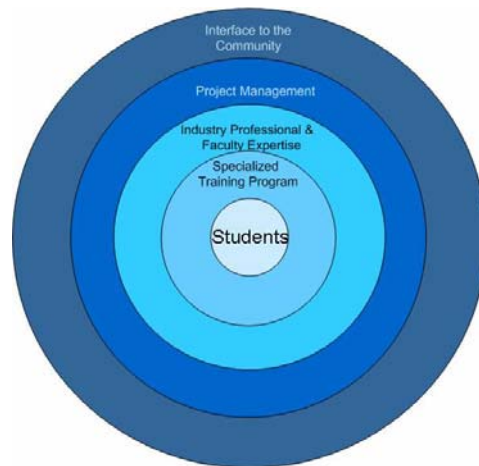
SMOs account for about 70% of worldwide employment. They account for 60% or more of the global GDP. SMOs are a critical part of the economic development of the state of Kentucky and the nation. Assisting these organizations so they can better leverage technology will return benefits ten-fold. A new survey finds that the strategic use of IT is one of the biggest challenges for small business growth, and one of the most important keys to success. Vernon Hills, Ill.-based value-added reseller CDW Corp surveyed 152 business executives or business owners who had successfully grown their small business into a medium-sized company with 100 employees or more. The survey results listed in the diagram below reinforces the concept that IT is a significant challenge for small organizations.

### **Lack of IT expertise could stall small business growth**

Thirty-eight percent of respondents said managing IT to their advantage was a significant challenge. The only challenge that eclipsed IT was recruitment and retention of employees, noted by 52% of respondents. Understanding customer needs, covering external costs of doing business and establishing and maintaining financial controls were barely a blip on the radar in terms of what they found challenging.

Collaboration can be a key innovation and accelerator of technology. Collaboration is now seen as an accelerator of technologies and economics by most organizations. According to Kathy Harris, vice president and distinguished analyst at Gartner Group - "To date, community and collaboration have been on the fringe of people's thinking, they were secondary to other considerations, From now on, these technologies have to be the first order of consideration when you prioritize your IT investments."

The graphic below illustrates the model for College Of Informatics engagement within the framework of this project. By taking the best NKU students and exposing them to professional project management, they can quickly make a difference in this project.



## 2. Project Objectives

The ultimate goal of this project is to provide a collaborative technology platform for K-12, city & county governments and small to medium businesses. This collaborative model would be incorporated into the overall Regional Stewardship mission of NKU. Students and faculty would be involved as appropriate in carrying out this mission.

The specific objectives of the Virtual CIO initiative are to:

- Provide a set of services and templates to allow organizations to analyze their use of technology today and help them plan for improving their adoption of technology. For example, a K-12 organization would have tools to do an assessment of where they are and work towards developing a road map to where they want to be
- Provide experiential learning opportunities for NKU students through a well defined technology model
- Provide a collaborative platform around technology for K-12, city & county government and small to medium businesses within the Commonwealth
- Deliver affordable services to the organizations that will allow them to leverage technology within their field
- Research and document technology best practices for these types of organizations and provide through a portal environment with self help information

The objectives listed relate to the region's strategic plan to grow economic competitiveness within the region and state. The overriding purpose of the region's strategic plan is to ensure that Northern Kentucky is capable of competing in a global economy, with our citizens benefiting from the prosperity and opportunity this creates. Technology exploitation is as vital as any other issue when it comes to economic competitiveness in a global economy. As part of the process, this initiative will improve the educational process within the region as well as expose IT students to the opportunities within the Commonwealth.

### 3. Description of Activities

Technology Collaboration Website: We will develop a portal via the internet to all the information available for the organizations participating. This website will provide for a community based collaboration model to further increase its effectiveness.

Technology Educational Seminars and Forums: We will develop and host technology forums that are of direct interest to the organizations that are participating in the collaboration. These events will provide direct value to the organizations adoption of technology.

Technology Service Center: A Technology Help Desk will be provided based upon the research of needs in this area. This will include self help information as well as information about technology trends, etc. This will include assessments and templates.

Technology Services: The initiative will provide lower cost IT based solutions for the organizations involved. A workflow process will be identified and a ITIL based service book of offerings will be adopted and posted. These services will be provided to the various organizations.

Technology Assessments: Self help and other value added assessment methodologies will be developed that will allow an organization to rate their adoption of technology as compared to others in a similar “business”.

While this particular initiative and funding will be completed at the end of June 2008, the university hopes this project will serve as a “pilot” for future years and will be the first of many initiatives undertaken to serve organizations in our region that require lower cost IT solutions. The belief is that this collaborative model can become a self sustaining initiative over time.

## 4. Partnerships

The university's College of Informatics will be the home of this initiative via the Infrastructure Management Institute(IMI). IMI and the College of Informatics will collaborate on the overall implementation of this project and various individuals from these organizations will be engaged. Faculty and students will be directly involved in the projects allowing them to directly participate in the regional stewardship initiative.

The Office of Information Technology(OIT) at the university will play an active role in this initiative as well. The outreach and stewardship activities will be able to leverage the talented staff that the university has internally to both educate and collaborate with members of the community. In particular, the university will identify specific individuals from OIT to work with the regional K-12 organizations as well as the city and county government personnel.

The IMI also is partnering with ConnectKentucky as these organizations have similar missions when it comes to furthering the success of the region and state. The partnership will be focused on the delivery of technology solutions to the organizations that are in need of assistance.

### About The Infrastructure Management Institute

The Infrastructure Management Institute (IMI) at Northern Kentucky University offers a new center of excellence, providing research and collaboration for best practice implementation, automation technology and operations processes for streamlining infrastructure management.

### About The College of Informatics

The name **informatics** embraces the modern concept of information in all its aspects: information management, infrastructure, processing, presentation, dissemination, design, and analysis. It is deeply integrative in approach. In practice, it ranges from the development of information technologies in the service of specific fields, to broader scholarly investigations of the representation, processing and communication of information in its full social context. The college unites faculty, students and outreach programs from the Department of Communication (with programs ranging from journalism and media to speech communication), the Department of Computer Science (offering degrees both in traditional computer science and in information technology), and the Department of Business Informatics (offering the business perspective on the management of information). The IMI, currently under development, provides an access

point for the private and public sectors to connect to the entire range of intellectual and physical resources available at NKU in the area of information science.

### **About ConnectKentucky**

By leveraging the latest in technology and networking, ConnectKentucky is ensuring Kentucky remains the place of choice to work, live, and raise a family. ConnectKentucky's mission is to accelerate the growth of technology in support of community and economic development, improved healthcare, enhanced education, and more effective government.

## 5. Resources and Sustainability

The Virtual CIO project team will utilize facilities within the College of Informatics and the Office of Information Technology(OIT). The College and OIT will provide general support for the program. Additional resources will be available through the networking already developed with the IMI. IMI has spent the last 12 months networking within the region and state and has identified many key individuals that are concerned and excited about the missions described in this initiative. One example of such a resource is Frank Caccamo. Frank is a retired former Chief Information Officer from Proctor & Gamble. He has been valuable in sharing how he provided leadership to IT organization at Proctor & Gamble and managed a true Global Enterprise entity. Frank has engaged directly with the University staff and students in our outreach mission.

Dr. Douglas Perry, Dean of the College of Informatics will be intimately involved in the success of this program. Dr. Perry has 33 years experience in higher education. In 1999, Dr. Perry helped found the Indiana University School of Informatics, the first entirely new school of its kind in the country. Dr. Perry came to NKU as founding dean of the College of Informatics in July 2006.

Vincent Scheben is the Project Coordinator for the Infrastructure Management Institute at Northern Kentucky University's College of Informatics. In this role, Vincent manages and coordinates projects within the Student Advanced Technology Program which assists regional business with technology needs, while giving Informatics students opportunities to apply classroom taught skills to real world scenarios. Vincent graduated with honors from Southern Ohio College in 1997 with an Associates of Science in Computer Science with a minor in Business Administration.

David Hirsch is the Program Director for the Infrastructure Management Institute at Northern Kentucky University's College of Informatics. In this role, David performs development and execution of strategic programs for the organization. David joined NKU in February of 2006 to assist in developing the Infrastructure Management Institute's programs. Prior to joining NKU, David was an Assistant Vice President at Computer Associates where he performed multiple roles including heading up project management for the flagship product line, building and managing a regional technical support team, software design and development, development and delivery of technical training, and customer facing pre and post sales engagements. David graduated with honors from NKU with a Bachelor of Science in Computer Science with areas of concentration in Mathematics and Business Administration.

Frank Braun is a faculty member in the Department of Business Informatics at Northern Kentucky University. He specializes in IT governance, IT security, IT strategy and Project Management. Mr. Braun has



over 20 years of executive level IT management and consulting experience. He is a founding board member of the Entrepreneurship Institute and Infrastructure Management Institute at Northern Kentucky University. His research areas include information security, business continuity planning, knowledge management and organizational leadership. He earned his BS from Miami University and MBA from Xavier University. He is currently an Executive Doctor of Management candidate at Case Western Reserve University.

Tim Ferguson, the Chief Information Officer at the University will directly lead this initiative. Tim is a 1985 Graduate of the Computer Science and Math programs at NKU and has over 20 years of professional IT experience dealing directly with organizations and adoption of technology. Tim spent the last several years as the SVP for the Enterprise Systems Management division at Computer Associates where he led business unit including R&D for a multi-billion dollar software product line.

## **6. Evaluation Plan**

The Virtual CIO Initiative will be evaluated based upon its overall impact on the organizations that participate. A detailed survey will be executed with organizations prior to engagement and follow ups will be performed at the appropriate times to measure the program's success. These surveys will provide a metric level collection point for the success of the initiative. The summary of this data will be posted to the project website.

As part of the evaluation plan, a scale representing an organization's Implementation of Technology will be developed and this will be used in an ongoing basis to track success of the initiative. A detailed study at the end of the project will result in a Executive Report that will document the first 12 months of the program and its overall performance.

## 7. Budget Narrative

A detailed budget for Virtual CIO initiative is provided in the following chart. The program will run thru December 31st, 2008 resulting in project expenditures during both fiscal years. Consequently, the budget expenses have been split between fiscal years 2007-2008 and 2008-2009.

			2007- 2008			2008-2009			TOTAL
Personnel Costs			CPE	Other	Total	CPE	Other	Total	
	Project Lead/Staff		30,000	15,000		14,400	15,500	13,760	27,520
	Student Workers		14,700	9,500		11,500	11,000		
	Faculty		15,100	2,750		3,800	2,750		
<b>Subtotal Personnel</b>			<b>60,100</b>	<b>2,750</b>		<b>29,700</b>	<b>2,750</b>		
Operating Expenses									
	Travel		7,500	2,000		3,300			
	Supplies		8,400	5,900		2,000			
	Food Service		3,000			1,000	1,942		
	Awards		1,000	1,333		500	1,777		
	Fundraising			3,000			3,000		
<b>Subtotal Operating</b>			<b>19,900</b>	<b>13,376</b>	<b>29,598</b>	<b>6,800</b>	<b>8,301</b>		
									0
<b>Grants, Loans, or Benefits</b>			<b>0</b>		<b>0</b>				<b>0</b>

<b>Debt Service</b>	<b>0</b>		<b>0</b>				<b>0</b>
<b>Capital Outlay</b>	<b>0</b>	<b>4,400</b>	<b>0</b>	<b>4,800</b>			<b>0</b>
<b>Total Direct Costs</b>	<b>80,000</b>	<b>16,126</b>	<b>57,876</b>	<b>36,500</b>	<b>11,051</b>	<b>52,801</b>	<b>110,677</b>

Breakdown by Category		CPE	Other	Total
	Personnel Costs			
	Operating Expenses			
	Grants, Loans, or Benefits			
	Capital Outlay			
<b>TOTAL</b>		<b>\$116,500</b>		

#### Virtual CIO Personnel Costs:

Personnel expenses for the Virtual CIO initiative will include a project lead person who will operate also as a staff member. In addition, there will be on additional staff member who will be the Program Manager and the main interface to the various outreach organizations. There will also be multiple faculty and students who will be funded to work on this initiative at various times of the project.

Travel Funds will cover travel costs to and from the various organizations that are participating in the project. Supplies will include standard office supplies materials needed for operation this project.

#### Sources of cost sharing and match:

The funds specified in the “other” category will be provided via a combination for corporate sponsors, funds from the institutional work study. These funds combined equal \$ xx,xxx in cost share.

It is expected that this initiative can be self sustaining within 24 months from inception.





# Vision 2015

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Talent, Innovation and Contribution

September 28, 2007

Melissa Bell  
Senior Associate for Academic Affairs  
Regional Stewardship Program  
Council on Postsecondary Education  
1024 Capital Center Drive, Suite 320  
Frankfort, KY 40601

Dear Ms. Bell

On behalf of Vision 2015 and the Regional Advisory Committee, I am writing to express enthusiastic support of Northern Kentucky University's proposal to the Council on Postsecondary Education's "Regional Stewardship Initiative Program". NKU's proposal "Summer Programs in Technology, Science, and World Cultures for Talented Youth in Northern Kentucky" addresses one of this region's most compelling needs, namely the development of young talent who will not only complete their education in this region, but who will stay in the region providing the key resource necessary to secure our economic future.

The proposal being submitted by NKU reflects the need to reach out to the region's brightest students. Most regions are suffering from the "brain drain" where local graduates lack accurate information on the high technology employment options within their region. The proposal from NKU seeks to address this problem in northern Kentucky.

NKU's proposal will improve students' awareness of high tech opportunities in the region, augment their knowledge of careers in the sciences and math, and importantly raise their understanding of global cultures. This understanding is especially critical to producing students and future employees who appreciate globalization and its complexities.

In closing, it is clear that NKU's proposal is squarely aligned with the goals of Vision 2015. Successful regions are characterized by three things, talent, technology, and tolerance. NKU's proposal embodies these imperatives and will help our region retain our best and brightest.

Sincerely,

  
Michael J. Hammons  
President

## Regional Stewardship Council

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REGIONAL STEWARDSHIP PROGRAM  
STEWARDSHIP INITIATIVES PROPOSAL

SUMMER PROGRAMS IN TECHNOLOGY,  
SCIENCE, AND WORLD CULTURES FOR  
TALENTED YOUTH IN NORTHERN  
KENTUCKY



NORTHERN KENTUCKY UNIVERSITY  
RESEARCH FOUNDATION

September 28, 2007

## **Project Abstract**

To further our strategic priority to “engage in effective regional stewardship” by supporting the economic and social progress of our region, Northern Kentucky University proposes offering summer programs for talented youth that focus on information technology careers, emerging scientific technologies, and cultural awareness. These summer 2008 programs will advance the university’s commitment to develop talent to meet the expanding needs of our region in the areas of economic competitiveness and multicultural understanding. These reflect significant needs identified in Vision 2015, the region’s 10-year strategic plan that positions our region to compete in the global economy.

Our most extensive proposed summer program, the INTERalliance IT Careers Camp, represents a collaborative effort of NKU’s College of Informatics, the INTERalliance of Greater Cincinnati, corporate sponsors, and Northern Kentucky area high schools. This residential camp experience will ignite interest among talented Northern Kentucky high school students in careers in information technology through service learning activities, corporate site visits, and competitive team challenges. NKU’s program of distinction, the Center for Integrative Natural Science and Mathematics, will offer a program for high ability high school and middle school students, focusing on emerging technologies. A third program, geared to gifted elementary school students, will promote multicultural awareness.



## Project Narrative

### 1. Analysis of Needs

The proposed summer programs for talented youth in Northern Kentucky address several significant regional needs identified in Vision 2015, the region's 10-year strategic plan that positions our region to compete in a global, knowledge-based economy. The university continues to use the Vision 2015 document as a guide for its regional stewardship work. Economic competitiveness is a major focus of Vision 2015. The Vision 2015 report states:

*Talented and skilled workers are fundamental to the ability of regions like Northern Kentucky to retain and attract high technology companies, advanced manufacturing, and advanced services firms. . . .Northern Kentucky must take advantage of opportunities to create high wage jobs in high technology businesses as one way to increase the region's wealth.*

The university has a vital role in preparing a talented workforce to fill technology jobs that will contribute significantly to the region's economic growth and stability. But unfortunately, students in the Northern Kentucky region and across the United States are not pursuing careers in technology, despite compelling evidence that these careers will serve them well. U.S. Bureau of Labor Statistics data show that three of the top ten fastest growing occupations through 2014 are in information technology, seven of the ten top careers are computer related, while four of this decade's top ten fastest wage/salary growth positions are in IT. (Bureau of Labor Statistics, March 2004 and Occupational Projections and Training Data, 2006-07 edition, Bulletin 2602.)

There is a misconception among students and their parents that "all the good IT jobs are going to India and China." While many of the "coding" jobs are being outsourced, these low paying jobs are not the jobs we want for our students. Management level jobs, such as project managers, database managers, business or systems analysts, are rarely outsourced off-shore. U.S. companies consistently require multi-culturally adept and highly skilled American workers to fill these positions. They report a shortage of such workers, especially in the high tech sector.

Consequently, our region needs to encourage students to pursue careers in technology and then retain them in the local workforce. Our region has experienced the exodus of our best and brightest high school students, as they leave the area for college, stay away for graduate school, and then begin their early careers in cities such as Boston, Atlanta, Austin, Chicago, or San Francisco. To attract and retain the best of the "young professionals," we need to make high school students aware of the educational and career

opportunities available in Northern Kentucky. The summer programs relating to emerging technologies and careers in IT that the university will offer will begin to address these needs and contribute to our region's long term goal of economic competitiveness.

Regions that hope to compete for talent must also offer an attitude of openness that welcomes diversity. In our region, only a small portion of our population is racially or ethnically diverse, which presents a growing concern considering that the world economy is diverse, multi-lingual and multi-cultural. The world cultures camp that the university will offer for Northern Kentucky elementary students will begin to open the minds of our younger students to embrace diversity and prepare them for their futures in the global society.

## **2. Project Objectives**

The overall objectives of the summer programs for talented youth are to:

- Develop critical thinking and creative problem solving skills;
- Expose high ability Northern Kentucky youth to local educational and career opportunities in science and technology; and
- Prepare Northern Kentucky youth for lives in the global society.

The INTERalliance IT Careers Camp program will accomplish the following objectives:

- Raise students' awareness of the significant role of IT in various career pathways and the value of IT skills for future employment;
- Raise students' awareness of the critical role IT plays in the problem-solving methodologies and processes of employers in all sectors;
- Raise students' awareness of educational programs in IT and Information Management offered by NKU's College of Informatics;
- Raise students' understanding of the importance of developing and utilizing a professional network; and
- Provide students with a service learning experience that benefits a non-profit organization by meeting an IT related need.

The Emerging Technologies camp will accomplish the following objectives:

- Develop creative problem solving skills in middle and high school students in the context of innovative approaches to problems in science and technology; and
- Motivate these students to pursue the study of advanced topics in science and mathematics.

The World Cultures Camp will accomplish the following objectives:

- Increase student's knowledge about other cultures; and
- Cultivate in our youngest students an appreciation for cultural diversity.

The foregoing objectives relate to the region's strategic plan to achieve economic competitiveness in a region that welcomes diversity, as previously discussed in the Analysis of Needs section. The overriding purpose of the region's strategic plan is to ensure that Northern Kentucky is capable of competing in a global economy, with our citizens benefiting from the prosperity and opportunity this creates. These objectives further the mandate of HB 1 by instilling enthusiasm for learning and better preparedness for postsecondary education which will enhance economic development and quality of life. These objectives further the goals of Questions 1 and 5 of the public agenda, by helping prepare more Kentuckians for higher education and by benefiting Kentucky communities with a pipeline of talented workers who are prepared for the global economy.

### **3. Description of Activities**

INTERalliance IT Careers Camp Program: Two one-week residential camp programs will provide a behind-the-scenes view into the world of information technology for twenty incoming 11<sup>th</sup> graders each of the two weeks. Students will be nominated by local Northern Kentucky high schools based on high ability and aptitude and will be selected by the university's program leadership. Participants will pay a student fee of \$35 to attend. Each session's students will be divided into four teams of five students, with each team sponsored by a local corporate sponsor who contributes a \$5,000 team sponsorship fee to support the costs of the program. The high schools with participating students nominate a teacher to serve as team advisor for one of the teams. The teams compete for medals throughout the week in a variety of problem solving exercises, teamwork challenges, and design projects, all of which will raise the awareness of the role of IT in business and the available careers in IT with local employers.

Each Monday, the teams will explore the world of IT at NKU, which includes the data center, computer labs, wireless environment, and university business systems. Tuesday through Friday mornings, the students visit the four corporate team sponsors and engage in problem solving activities. The students are joined for lunch by the CIO and senior IT management team of the host corporate sponsor, for discussion about educational and career opportunities. The CIOs view these sessions as an early recruiting opportunity during which they can encourage these high ability students to consider employment with them after college.

Each afternoon the teams engage in a design competition to conceive an IT solution for a local non-profit organization, such as a website or a technology design that addresses an important business need of that organization. Each day the students explore the next facet of the "solution development lifecycle," starting with assessment and traversing through the design, build, test, and deployment phases. After dinner and evening recreational activities, the teams return to work on their projects back at the dorms, experiencing a taste of the "real world" deliverables crunch so typical in IT. On Friday, representatives of the non-profit organizations serve as a panel of judges reviewing the competing teams' presentations, offering critiques, and selecting the winning designs.

For the final celebration, the teams present their design to the other students, university faculty, invited parents and guests, and representatives of the corporate sponsors.

The activities of the IT Careers Camp will accomplish the project's primary objectives by developing critical thinking and problem solving skills in the students as they engage in IT activities at the site of the corporate sponsors and compete to design an IT solution for a local non-profit organization. In addition, the university experience and site visits to the corporate sponsors will expose these talented students to local educational and career opportunities in IT.

Emerging Technologies Camp Program: Two one-week day camps will be offered by the university's Center for Integrative Natural Science and Mathematics (CINSAM). One camp will be geared to students entering grades 7-9, with the other camp for students entering grades 10 and 11. Each camp would have 15-20 high-ability students chosen from Northern Kentucky schools. Participants will pay a student fee of \$30 to attend.<sup>1</sup> Topics for the camps, which will be based on faculty research interests, will include such areas as:

- Physics: carbon nanotubes, phase transition in glasses and ceramics, cosmic ray detection;
- Geology: surface wave analysis for building site classification, subsurface imaging, groundwater hydrology;
- Biology: microbial genetics, genomics, neurosciences, cancer-related studies;
- Computational sciences: biocomputing, bioinformatics, computational physics;
- Chemistry: molecular modeling, energy storage via novel molecules, novel molecules for drug delivery.

Students will engage in a variety of scientific investigations lasting several days each, utilizing the most sophisticated equipment available at the university under the supervision and direction of NKU faculty. Each investigation will consist of an introduction to the problem, investigation into the science or technology to be used, guided experimentation activities in the lab or the field, career-oriented site visits, discussion of results and conclusions, and preparation for presentation of results. The camp will culminate with the student poster presentations for parents, the faculty, and other guests.

The activities of the Emerging Technologies camp will accomplish the project's primary objectives by developing critical thinking and problem solving skills in the students as they engage in advanced scientific investigations with university faculty. In addition, the university experience and career-oriented site visits will expose these high ability students to local educational and career opportunities in science and technology.

World Cultures Camp: Two one-week day camps will be offered by the university's College of Education and Human Services for students entering grades 3-6. Northern

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<sup>1</sup> CINSAM-supported scholarships to cover the student camp fees will be available to students in need upon request.

Kentucky elementary schools will nominate gifted students to attend these programs. To ensure a personalized enriching experience, enrollment will be limited to 20-25 students per week. Participants will pay a student fee of \$30 to attend.<sup>2</sup> The week-long full day sessions will focus on the cultures of a new region or country each day. The camp activities will include films, demonstrations, computer activities, and creative learning activities. The topics will include world location, physical geography, climate, sports, dress, food, language, music and dance. The students will be introduced to simple words and meanings of people, places and things in the language of each country studied. The students will be linked to international e-mail pals to encourage further communications across cultures.

A World Cultures Camp was successfully offered last summer, focusing on India, Asia, Africa, the Middle East, Bulgaria, Cuba and Peru. Unlike last summer's camps, the summer 2008 camps will be geared specifically to gifted students, and the programming will be enhanced to provide more challenging activities for this group of students. The activities of these programs will accomplish the project's objective to cultivate an appreciation for cultural diversity and prepare our youngest students for lives in a global society.

The summer programs project is intrinsically linked to the university's core academic function. The first strategic priority of the university's 2007-12 strategic plan, *The Talent Imperative!*, is indeed to "Develop Talent." The priority states:

*The university's primary role is to develop talent in northern Kentucky and the commonwealth. To sustain our commitment to talent development and meet the ever-expanding needs of our region and the commonwealth, we will:*

- *Offer educational and enrichment programs to serve high-ability and talented youth, in their schools and on our campus, face-to-face and through technology, in the summer and during the school year<sup>3</sup>.*

While this particular summer programs project will be completed at the end of summer 2008, the university hopes this project will serve as a "pilot" for future years and will be the first of many initiatives undertaken to serve talented youth in our region. We will continue to seek appropriate funding sources so that we can grow our initiatives in this area.

#### **4. Partnerships**

The university's summer camps program will involve a variety of community and regional partners. The INTERalliance IT Careers Camp program is a true collaboration among the university, the INTERalliance of Greater Cincinnati, four to eight corporate sponsors, and Northern Kentucky high schools. The INTERalliance is a collaborative

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<sup>2</sup> Scholarships to cover the student fees for the World Cultures Camp will be available to students in need upon request.

<sup>3</sup> This is one of eleven strategies listed under the "Develop Talent" priority in the university's strategic plan.

effort of Greater Cincinnati/Northern Kentucky businesses and educators, which is creating an environment that gives local young IT talent a compelling reason to stay in the region both for college and their careers. The mission of the INTERalliance is to create a renowned, thriving and sustainable pool of IT talent in our region that not only fulfills local demand, but is strong enough to attract new employers to the area. The INTERalliance will provide program design, development and creation, outreach to corporate sponsors, program oversight, and keynote speakers for the program.

The university's College of Informatics will host the program, providing facilities, faculty participation, and management oversight for the program. University dormitories will be used to house the students and the students will dine on campus, providing a real college experience. Corporate sponsorship slots are filled with four to eight sponsors, at \$5,000 per sponsorship. The team sponsors provide branding for each team (e.g., "Team Comair," "Team Fidelity,"), host a site visit, and provide a lunchtime keynote address by IT executives on career opportunities. Anticipated 2008 IT Careers Camp sponsors include Toyota, Comair, Fidelity Investments, Schneider-Electric, and General Cable.

Northern Kentucky high schools will nominate students to participate, provide faculty or staff members to serve as team advisors, and provide follow-on activities for continued involvement by participating students during the school term.

The Emerging Technologies camp will be hosted by CINSAM and university faculty will work directly with students attending. CINSAM will partner with GearUp Kentucky schools, as well as other local schools, to identify talented students who will benefit from the opportunity to participate in these camps. After the research topics of the camps are finalized, partnerships with regional corporations or organizations, such as P&G, will be established to provide site visit opportunities for the students.

The World Cultures Camp will be hosted by the university's College of Education and Human Services in partnership with local elementary schools, which will identify and nominate gifted students to attend. The Global Center of Greater Cincinnati will serve as a regional partner for the project, providing educational program materials for the camps. The Global Center is a non-profit, non-partisan organization that frequently partners with area universities and schools on projects involving global issues.

## **5. Resources and Sustainability**

The INTERalliance IT Careers Camps will utilize facilities within the College of Informatics and the College will provide general support for the program. Additional resources will be available through the INTERalliance, which will provide in-kind services and financial contributions from the corporate sponsors. The INTERalliance IT Career Camp program at NKU will coordinate with other initiatives seeking to address the same regional need for IT talent by continuing a program that was piloted two summers ago by the INTERalliance and the University of Cincinnati. That program was highly successful and attracted twenty talented students from six high schools in

Cincinnati, and then grew to sixteen high schools this past summer. Holding the IT Careers Camps at NKU during the summer of 2008 will allow Northern Kentucky youth to participate in this program. The INTERalliance IT Careers Camp program is part of a three-tiered continuum administered by the INTERalliance that offers students pre-employment opportunities. The other two components involve paid IT summer internships for high school students who have completed their junior or senior year and work co-ops during undergraduate and graduate degree programs.

The key university personnel who will be involved with the INTERalliance IT Careers Camp include Dr. Douglas Perry, Dean of the College of Informatics and Teri Slick, Assistant Dean. Dr. Perry has 33 years experience in higher education. In 1999, Dr. Perry helped found the Indiana University School of Informatics, the first entirely new school of its kind in the country. Dr. Perry came to NKU as founding dean of the College of Informatics in July 2006. Teri Slick serves as the Assistant Dean for the College of Informatics and is responsible for advising students in the college. She came to NKU after years of advising at other universities, where her duties also included recruiting high-achieving high school students into dual admissions programs. She will oversee the hiring and supervising of a program coordinator for the IT Careers Camp program.

Doug Arthur, Executive Director and co-founder of the INTERalliance, is the key partner personnel involved in the initiative. Mr. Arthur also serves as the Manager of Great Lakes Commercial Support Services for Atos Origin, Inc., a Paris-based global IT services firm that manages all IT for the Olympic Games and many of P&G's interactive marketing web strategies. Mr. Arthur previously owned and worked for several management consulting firms and served as a public school educator.

Students attending the Emerging Technologies camp will have access to a broad array of scientific equipment which includes the scanning electron microscope, nuclear magnetic resonance device, laser laboratory, atomic force microscope, x-ray diffraction device, and micro array facility. This equipment is valued at more than \$3 million and the technician time for its use will be contributed, at the approximate rate of \$100/hour, during camp times. CINSAM personnel will provide administrative support for the planning and operation of the camps. This camp will further an important goal of CINSAM, which is to address the need for advanced science and math programs for middle school and high school students in our region.

The key university personnel for the Emerging Technologies camp include Dr. Phillip Schmidt who is Professor of Mathematics and Director of CINSAM. The mission of CINSAM is to enhance the teaching, learning and applying of science and mathematics at the university and in the schools of the Northern Kentucky region through interdisciplinary collaboration. CINSAM was established by the Council on Postsecondary Education in 1999 as the Program of Distinction at NKU. As director, Dr. Schmidt oversees all activities of CINSAM, including summer programs for middle school and high school students and other outreach efforts for P-12 students. Thomas Brackman, M.S. will serve as director for the Emerging Technologies camp. As the Physical Science and Pre-Engineering Recruiting Director for CINSAM, Mr. Brackman

has developed and implemented a program designed to foster and build the interest of high school students in obtaining a degree in the physical sciences and/or pre-engineering. He has assisted in the development and coordination of the CINSAM summer Engineering Camp, Women in Engineering Camp, and forensic science camps. Prior to working at CINSAM, Mr. Brackman operated his own construction company and worked as an environmental hydrogeologist.

The World Cultures Camp will utilize campus facilities, and will be staffed by university faculty as well as undergraduate and graduate international students. By partnering with the Global Center on this project, the camp will coordinate with other educational initiatives that seek to address global issues and cultural awareness in our region.

The World Cultures Camp will be co-directed by Dr. Elaine Jarchow, Dean of the College of Education and Human Services, Dr. Mary Rozier, College of Education and Human Services faculty, and Ms. Viki Kimball, director of International Student Affairs for the university. Dr. Jarchow has extensive experience teaching and traveling abroad, and currently is spearheading an initiative to internationalize the university. Dr. Rozier has been an educator for over 40 years. Prior to joining NKU in 1999 as a full time faculty member, she worked as a teacher of grades 1-6, an administrator, principal and educational consultant. Dr. Rozier currently teaches in NKU's Instructional Leadership Program. Viki Kimball oversees international student admissions and international student programming. In addition, her office aids international students with their general welfare and guides them in their relations within and outside of the university community so that they can be successful in achieving their educational goals. Ms. Kimball will direct the graduate and undergraduate international students who will participate in camp activities.

## **6. Evaluation Plan**

All of the summer camp programs will engage in formative evaluation on a daily basis. A daily student feedback form will provide information about which activities were considered most effective to the students. Daily staff debriefs and discussions at the end of each camp day will review each day's activities to identify areas needing improvement, individual students requiring more attention, and successful activities that deserve retention in the camp programs.

The outputs associated with the summer camps program will be student projects completed by participants in each of the respective camps. Students in the INTERalliance IT Careers Camp will design and deliver an IT solution for the "client" non-profit organization. The students will prepare a corresponding PowerPoint presentation that communicates the design, the business case, value proposition, and information about the development team. The "solutions" developed by the students will be evaluated based on the clients' satisfaction and appropriateness for possible deployment and use in their organization. Students in the Emerging Technologies camp will complete a number of scientific investigations and present their findings during a



poster presentation celebration. The projects will be evaluated by CINSAM faculty and the students' satisfaction with their projects will be measured. Students in the World Cultures Camp will present an international festival for their parents and invited guests on the closing day of the camp. At the festival, the students will share projects completed during the week and teach their parents some international greetings. While these projects will be more difficult to evaluate, parents' satisfaction with the festival and presentations will be measured.

Expected outcomes from the INTERalliance IT Careers Camp are changes in student attitudes, expectations, and understanding of the educational and career opportunities in IT available to the Northern Kentucky/Greater Cincinnati area. Testimonials from students who attended the IT Careers Camp last summer at the University of Cincinnati demonstrate that many of the student participants came to view IT as a possible career choice and saw the opportunities for employment in this region after participating in the camp. These expected outcomes will be evaluated through short and long term surveys to assess students' attitudes toward careers in IT as well as their likelihood of pursuing educational and career opportunities in IT in the Northern Kentucky region. These outcomes are clearly linked to the region's need to develop talent to meet the workforce demands of high technology businesses.

Expected outcomes from the Emerging Technologies camp include increased knowledge for high ability students about advanced topics in science and math and changes in their attitudes about pursuing the study of these subjects in college. In addition to using attitude surveys given to students before and after the camp, the Emerging Technologies camp will design longitudinal studies of course-taking patterns and eventual college and major choices. These outcomes are clearly linked to the region's need to develop talent in the disciplines of science and technology.

Students in the World Cultures Camp will be expected to gain an intellectual curiosity about other cultures. Participating students as well as their parents will be surveyed to assess changes in students' understanding and appreciation of the cultures studied during the camp. Teachers from the students' school will be surveyed in the fall to determine changes in students' enthusiasm for international topics and attitudes towards cultural diversity.

The expected impacts of the project include increased enrollment in science, math and IT related undergraduate and graduate programs at NKU and other universities and colleges in the region as well as increased numbers of students pursuing science and technology careers in the Northern Kentucky region. Other expected impacts include an increased interest by younger students in our region in other cultures as well as a greater tolerance for diversity in our own region. These impacts will further the goals of Vision 2015 to achieve economic competitiveness in a region that welcomes diversity,

The key indicators that will help monitor progress toward objectives are as follows:

- 1) INTERalliance IT Careers Camp: Student projects will receive direct feedback from their non-profit "clients" and actual use of the work products by these non-profit clients will be encouraged to the degree practicable. Corporate sponsors

- will provide direct feedback and are expected to demonstrate a high level of satisfaction with the overall program, increased student awareness about their respective companies and regional careers opportunities in IT. Participant surveys will show changes in attitudes toward careers in IT and as well as the likelihood of pursuing educational and career opportunities in the Northern Kentucky region.
- 2) Emerging Technologies Camp: Students will report a high level of satisfaction with the program and with their final projects.
  - 3) World Cultures Camp: Projects shared with parents will be of a high quality and parents will express satisfaction with the closing international festival and the overall camp experience.

## **7. Budget Narrative**

Proposed Expenditure Budget:

Category	2007-08	2008-09
Personnel Costs	\$28,278	\$28,278
Operating Costs	\$29,598	\$24,523
Grants, Loans, or Benefits	\$0	\$0
Debt Service	\$0	\$0
Capital Outlay	\$0	\$0
Total	\$57,876	\$52,801

A detailed budget for each of the three summer programs is provided in the following chart. The description of items in this budget and the justification for personnel expenses by camp program are discussed below. The camps will occur throughout the summer months (June-August), resulting in project expenditures during both fiscal years. Consequently, the budget expenses have been split between fiscal years 2007-2008 and 2008-2009.

## Budget Detail

		2007- 2008			2008-2009			TOTAL
Personnel Costs		CPE	Other	Total	CPE	Other	Total	
	IT Careers Camp	13,760		13,760	13,760		13,760	27,520
	CINSAM – Emerging Technologies Camp	9,850		9,850	9,850	0	9,850	19,700
	World Cultures Camp	1,918	2,750	4,668	1,918	2,750	4,668	9,336
<b>Subtotal Personnel</b>		<b>25,528</b>	<b>2,750</b>	<b>28,278</b>	<b>25,528</b>	<b>2,750</b>	<b>28,278</b>	<b>56,556</b>
Operating Expenses								
	IT Careers Camp							0
	Transportation	2,437		2,437	2,437		2,437	4,874
	Supplies	2,480		2,480	2,480		2,480	4,960
	Food Service	2,000	1,942	3,942	2,000	1,942	3,942	7,884
	Awards/Premiums	805	1,777	2,582	805	1,777	2,582	5,164
	Overnight Expenses	500	3,532	4,032	500	3,532	4,032	8,064
	Fundraising		5,075	5,075				5,075
	License fee	5,000		5,000	5,000		5,000	10,000
	CINSAM-Emerging Techn.							0
	supplies	1,000	450	1,450	1,000	450	1,450	2,900
	travel	500		500	500	0	500	1,000
	World Cultures Camp	1,500	600	2,100	1,500	600	2,100	4,200
<b>Subtotal Operating</b>		<b>16,222</b>	<b>13,376</b>	<b>29,598</b>	<b>16,222</b>	<b>8,301</b>	<b>24,523</b>	<b>54,121</b>
Grants, Loans, or Benefits		0		0				0
Debt Service		0		0				0
Capital Outlay		0		0				0
<b>Total Direct Costs</b>		<b>41,750</b>	<b>16,126</b>	<b>57,876</b>	<b>41,750</b>	<b>11,051</b>	<b>52,801</b>	<b>110,677</b>

Breakdown by Camp		CPE	Other	Total
	IT Careers	\$53,964	\$19,577	\$73,541
	CINSAM Emerging Technologies	\$22,700	\$900	\$23,600
	World Cultures	\$6,836	\$6,700	\$13,536
<b>TOTAL</b>		<b>\$83,500</b>	<b>\$27,177</b>	<b>\$110,677</b>

### INTERalliance IT Careers Camp Budget and Personnel Costs:

Personnel expenses for the IT Careers Camps in the total amount of \$27,520 will cover the following:

- A Summer Program Coordinator to plan, administer and evaluate the program at \$12,000 (part-time, partial year position);
- Camp Director to direct both camp sessions at \$10,000;
- \$400 stipends for eight Team Advisors for a total of \$3,200;
- \$35 per night stipends for 4 dorm monitors for a total of \$1,120;

- One-day training of program development staff by Doug Arthur of INTERalliance plus eight hours of follow-up consulting work with sponsors to plan site activities for a total of \$800 (16 hours at \$50/hour);
- One-day training by Doug Arthur of INTERalliance of Program Director and staff who will work with the high school Team Advisors for a total of \$400 (8 hours at \$50/hour);

Operating expenses for the IT Careers Camp in the amount of \$ 40,946 will cover the following:

- Transportation expense for site visits bus rental, parking and mileage reimbursement at \$4,874;
- Supplies, which include binders, art supplies, student t-shirts, staff and sponsor polo shirts, banner and team flags, slideshow scrapbook/video editing supplies, copying, mailing supplies, and postage at \$4,960;
- Food service expense for student meals, snacks, staff training dinner, Friday banquet lunches at \$7,884;
- Awards/premiums, which include backpacks, flash memory sticks, medals, frames for certificates of participation, design contest plaques and director gifts/awards at \$5,164.
- Overnight expense for student housing at \$8,064;
- Fundraising expenses related to corporate sponsorships at \$5,075 (Regional Stewardship grant funds will not be used to cover these expenses);
- One- year license fee in the amount of \$10,000 for use of all templates, checklists, program materials necessary for operating the INTERalliance IT Careers Camp program, including registration forms, release forms, planning documents, vendor contracts, parent, school and sponsor communication templates, activity plan templates, award certificate templates.

#### Emerging Technologies (CINSAM) Camp Budget and Personnel Costs:

Personnel expenses for the CINSAM Camps in the total amount of \$19,700 will cover the following:

- Faculty salary for 6 hours work/per camp day at \$50-65/hour (depending on annual salary);
- Student assistant salary for 4 hours/day at \$12/hour;
- School teacher assistant for 4 hours/day at \$30/hour;
- Camp director at a cost of one month summer salary of \$4,250.

Operating expenses for the CINSAM Camps in the amount of \$3,900 will cover the following:

- Supplies and food at \$2,900;
- Travel to field and/or career/related sites at \$1,000.

World Cultures Camp Budget and Personnel Costs:

Personnel expenses for the World Cultures camp in the amount of \$3,836 will cover the faculty salary of Dr. Mary Rozier to coordinate the camp. Personnel expenses in the amount of \$5,500 for student workers assisting with the camps will be covered by university institutional work study funding.

Operating expenses for the World Cultures Camp in the amount of \$4,200 will cover supplies, food and all expenses related to the international festival on the closing day of the camp.

Sources of cost sharing and match:

Corporate sponsors will provide \$18,177 in operating costs for the INTERalliance IT Careers Camp. Student participant fees for all three camps will contribute \$3,500 toward the total budget expenses. The university will contribute \$5,500 of institutional work study funds to cover student worker salaries. These funds combined equal \$27,177 in cost share.

November 16, 2007

Dr. James L. Applegate  
Vice President for Academic Affairs  
Kentucky Council on Postsecondary Education  
1024 Capital Center Drive, Suite 320  
Frankfort, KY 40601

Dear Jim,

Please find attached NKU's Regional Stewardship Initiatives Proposals that were submitted on September 28, 2007 and our response to the questions posed by the reviewers. A hard copy will be mailed today. Please let me know if there are additional questions to be addressed or if there is any further information we can provide to insure approval at the December CPE meeting.

I hope all is well with you and wish you and the entire CPE staff a wonderful Thanksgiving holiday.

Cheers,

*Gail W. Wells*

Gail W. Wells  
Vice President for Academic Affairs  
and Provost

attachment



# REGIONAL STEWARDSHIP PROGRAM STEWARDSHIP INITIATIVES PROPOSAL

## Supplemental Response



NORTHERN KENTUCKY UNIVERSITY  
RESEARCH FOUNDATION

November 16, 2007

This response provides the supplemental information requested by CPE to support Northern Kentucky University's Regional Stewardship Initiatives Proposals that were submitted on September 28, 2007. The comments provided by CPE are stated first, followed by our response.

## **Virtual CIO**

1. **CPE Question(s):** The objectives of the initiative are stated very broadly. What specific metrics will be used to determine the initiative's success? For instance, one objective is to "Deliver affordable services to the organizations ..." How many organizations will be served in order to deem this initiative successful?

**NKU Response:** The Virtual CIO program will focus on regional K-12, city/county government entities, non-profit organizations and other small to medium organizations. To deem this pilot a success, we will deliver services to 8-10 organizations during the project period. Each organization will be asked to complete an evaluation form at the end of the project to assess satisfaction and to evaluate the results of the services. At the conclusion of the pilot, Virtual CIO framework methodologies will be extended to provide technology outreach to a broader audience.

2. **CPE Question(s):** What role did the business, government, and nonprofit sectors play in the program design and evaluation plan?

**NKU Response:** Over the past several months, the Infrastructure Management Institute, through its outreach to business, governments and nonprofit organizations, developed a detailed understanding of the technology needs of these organizations. For example, the Institute reviewed the IT infrastructure for the City of Ashland and for Northern Kentucky Tri-ED. Additional work with the United Way and non-profit organizations enabled the Institute to gain considerable understanding of the technology gaps that exist in small to medium size non-profit organizations in the state of Kentucky. We spent significant time involving these types of organizations in assessing their needs and developing the list of services described in our original proposal. Using all of that research, the Institute developed the overall program design and evaluation plans outlined in the proposal. Further, we will assess the information discovered during the course of the project to enhance the best practice implementation of these services and adjust the plans accordingly.

3. **CPE Question(s):** How will you generalize the results of this individualized technical assistance in order to help other organizations in the region? These grants are aimed to developing successful "pilots" that can then be incorporated into the broader regional stewardship efforts. That means there should be clear metrics that define success and some ideas about sustainability and expansion assuming success.



**NKU Response:** As similar organizations tend to have similar technology requirements and challenges, we are implementing repeatable processes, based on best practice, which can be applied to assist other organizations in the region. Because technology is an important aspect for K-12 schools and city/county governments, it is critical to ensure proper implementation, security, and IT management for these organizations. Through such tools as online surveys and assessments, data will be collected and correlated to provide a holistic view of organizational requirements, ultimately benefiting all organizations. We have done the research necessary at this point to identify the need for this project and with a successful pilot, we will have a program that can be repeated and expanded. This program will likely be capable of self funding once it gets off the ground.

As previously stated, we will have each organization complete an evaluation form to determine the impact this project had on the success of the organization. The metrics for success will include:

- 1) technology deployment ratings;
- 2) return on investment indicators;
- 3) value ratings for each type of service;
- 4) overall rating for the program of services.

We will produce a summary of our results and findings that may be shared with others to promote an expansion of the program throughout the state.

## **Summer Programs**

1. **CPE Question(s):** Please elaborate on your decision to focus solely on high-ability students for the technology camps.

**NKU Response:** In order to cultivate a highly desired pipeline of young local talent for the local business community, the INTERalliance has targeted students for the IT Careers Camps who are of higher-than-average ability in one or more areas, are clearly college-bound, and have either selected IT as a likely career path, or are undecided about their college major or field of study. This target group is well documented as the sector of the student population that often leaves the Northern Kentucky/Greater Cincinnati region for college, breaking ties made during high school that are often not re-established when they are ready for their first job.

Based on the profiles of students who have thus far successfully participated in INTERalliance programming, high-ability as a criterion for selection to participate is expressed in many different ways:

- high academic achievement
- high work ethic
- high aptitude for critical thinking
- high interest in computer science
- high problem solving capabilities
- high leadership potential.

Better than average abilities in these areas have proven to be a formula for successful participation in the INTERalliance IT Careers Camps program.

By establishing a higher bar than is often set for such programs, “pull up” forces will be leveraged (rather than “push up” forces), allowing the program to reach down into all schools and attract (“pull up”) high performing students from all socioeconomic backgrounds and levels from all local school systems, based on work ethic, academic performance, and aptitude.

The goal of the CINSAM emerging technology camps is to build academic and career interests in the sciences and mathematics among the camp participants. The topics treated in the camps will require students to have an ability to handle complex issues in science, engineering, and technology. Consequently, students with high-ability in the areas of math and science will benefit most from participating in these particular CINSAM camps. Since CINSAM will partner with programs like GearUp Kentucky schools to recruit students, these camps should enroll a diverse student population.

As discussed in our original proposal, the summer programs project is intrinsically linked to the university’s first strategic priority, which is to “Develop Talent.” An important action for developing talent and meeting the needs of our region and the commonwealth, as delineated in the university’s strategic plan, is offering educational and enrichment programs to serve high-ability and talented youth on our campus during the summer.

2. **CPE Question(s):** Please give more details on your plans for long-term sustainability of these camps. Also please elaborate on the decision not to include any follow-up activities after each camp that would help sustain the momentum built during the camps. For instance, in terms of the World Cultures Camp, there is a great deal of time before a third grader would enter the global, knowledge-based economy, which is the ultimate goal identified by the needs analysis. Will this effort be linked to other ongoing programs?

**NKU Response:** As has been the custom with previous CINSAM camps (e.g., CSI I, II, and III were created in sequence), CINSAM will build on this first year's camps to offer advanced versions of the camps to student participants in subsequent years. They will become a part of the normal CINSAM camp offerings. CINSAM is in the process of reducing the offerings of some of its existing camps in order to allow for the expansion of these camps in the future. The emerging technology camps will therefore be sustained by general CINSAM funds after the initial grant period, provided that the new camps are successful in achieving the goals established.

Some of the students participating in the CINSAM camps are likely to be sufficiently interested in the projects begun in the camps to continue to pursue them during the academic year. CINSAM will work to match those students with interested faculty and provide facilities to enable this collaboration. In particular, CINSAM will encourage students or teams of students to prepare projects for the regional, state, and possibly even international science fairs.

The INTERalliance IT Careers Camps include a number of follow-up activities, which are fully discussed in the response to item 3 below, as they also relate to the assessment plan for the IT camps. (See that discussion below.) As for the sustainability of these camps, this grant funding will serve as seed money for the development of future IT Careers Camps serving youth in the Northern Kentucky region, in that NKU and the INTERalliance will use this experience as a model to cultivate more broad based corporate support for subsequent summer camps.

With respect to the World Cultures Camp, participants will be invited to participate in follow-up programs. As noted in our proposal, each participant will be paired with an international student from NKU and the pair will exchange emails during the year. These emails will focus on events that are occurring in the international students' countries. Other follow-up activities may be planned as well. For example, camp participants will be invited to two events that happen on campus during the academic year. In the fall, the students will be invited to attend events held as part of International Week in November, which will include viewing a film about another country. In the spring, the students will be invited to part of a book day where they will hear stories from other countries and receive a book about life in another country. As NKU pursues the goal of internationalizing the campus, additional events and programs focused on international themes will be held. We will invite students who have attended the World Cultures Camp to return to campus to participate in age appropriate events.

3. **CPE Question(s):** While the key indicator of progress for the INTERalliance campus is feedback from nonprofit clients, the key indicators and evaluation measures for the other two camps focus on student satisfaction. Are there other ways to evaluate each camp's success? Also please provide more details on the assessment plan for each camp. For instance, the INTERalliance camp administrators plan "long term surveys to assess students' attitudes ..." When will these surveys be administered? How do administrators plan to keep track of students after the camp? Again, the reviewers were concerned that without these details we might be funding a few summer camps with no clear link to longer term goals.

**NKU Response:** For the CINSAM emerging technology camps, student satisfaction with the camp experience along with the students continued participation in science and math activities and their eventual pursuit of STEM careers will be the key indicators of the camps' success. CINSAM will maintain contact with the students through their parents after the camps and will survey the students annually on their course-taking patterns especially in mathematics and science as well as on their continuing interest in STEM careers. We will also record their involvement in science outside of school, for example, through participation in science fairs, science Olympiad, and similar activities. Finally, CINSAM will track the camp participants to the point where they determine their post-secondary careers. As a condition of acceptance into the camp, students and their parents will agree to cooperate with this ongoing data collection and reporting.

In addition to student and parent satisfaction with the camps, which we believe is an important factor to assess, student learning and future behavior and attitudes will also serve as indicators of the success of the World Cultures Camp. Students participating in the World Cultures Camp will participate in pre and post camp one-on-one interviews. During those interviews, the students will be shown a map of the world and asked to identify various countries. Other interview questions will include asking them to say any words they know in another language, as well as asking them if they know what games children in other countries play or how those children dress. As discussed in our proposal, future behavior and attitudes will be assessed by surveying teachers from the students' school to determine changes in students' enthusiasm for international topics and attitudes towards cultural diversity.

The key indicators of progress for the INTERalliance IT Careers Camps program are multi-tier and multi-faceted, as follows:

- **Immediate Participant Feedback 1:** Upon entry to the program, the participating students complete a detailed one-page “pre-survey” that documents their perceptions about the IT industry, careers related to it, the types of people who succeed in such careers, and related issues. Two to three weeks after attending the program, each participating student is mailed the same survey to complete again as a “post-survey.” The results are tallied and compared to measure the changes in attitude and perceptions, if any, that can be directly attributed to the IT Careers Camp experience.
- **Immediate Participant Feedback 2:** Each day concludes with the participating students completing a one-page feedback form on which the students indicate their most and least favorite activities of the day, what they felt provided the biggest “a-ha” moment, if any, and what they would keep and change for next year’s participants. The results are tallied and evaluated for use in future program development.
- **Daily Team Advisor Feedback:** As part of daily programming, the staff members serving as Team Advisors to the four competing teams meet each day from 4:30 pm to 5:00 pm to review the day’s activities, identify issues requiring immediate corrective action, discuss and resolve issues pertaining to specific participating students, sponsors, logistics, programming, and any other facet of the program that might affect the quality of the educational experience or achievement of the learning objectives. Best practices and events/activities particularly worthy of enhancement or repeating are discussed and noted by the Program Director at these daily debriefs.
- **Student Participant Tracking 1:** Each participating student is issued an “INTERalliance” membership card, and is inducted into the INTERalliance as a member in good standing as a result of their participation in the summer program. These student members return to their respective high schools in September, to join a new or existing chapter of the INTERalliance at their schools. These INTERalliance chapters elect a student coordinator who works with a faculty coordinator. The chapters meet regularly throughout the school year to discuss career opportunities in IT and host events within their school related to IT careers that are organized by the INTERalliance members, but open to the student body. As a requisite of being an “official” chapter, each high school chapter must host at least one event each year related to IT careers that is open to INTERalliance high school members from all chapters around the region. During the 2007-2008 school term, there will be at least 16 high

school chapters hosting events. In 2008-2009, the plans are for 32 participating high schools, with growth continued until all regional high schools have been given the opportunity to participate.

- **Student Participant Tracking 2:** Student members will continue to be members of this “professional society” throughout high school, undergraduate, and graduate school. Members will be regularly contacted via email campaigns, invited to participate in INTERalliance events, and asked to continue to share their experiences and perspectives through follow-up surveys and questionnaires. Summer internships and co-ops will be sought and offered on a preferential basis to INTERalliance student members in local high school, undergraduate, and graduate school programs. INTERalliance alumni who accept positions at local employers will be recruited as corporate INTERalliance sponsor participants to help cultivate the future student members of the INTERalliance, mentor these students, and create an ongoing sustainability of the programs.